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TITLE: Rapid post-condensation of (co)polyamide(s) -
by reactive coupling in the melt with
thermoplastic oligo- or polyurethane(s)
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ASSIGNEE-INFORMATION:

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ABSTRACT:

Rapid prodn. of more highly condensed oligo- and/or (co)polyamides (I) from thermoplastic oligo- and/or (co)polyamides with at least one free amino and/or COOH end-gp. (II) comprises reacting (II) in the melt with thermoplastic oligo- and/or poly-urthanes (TPU) (III), with thorough mixing of the components. (III) are used in pure form or mixed with other types of TPU, in the solid or molten state, or dissolved or dispersed in inert solvent. The amt. of (III)

used corresponds to 0.1-2 equivs. blocked NCO gps. per equiv. free amino and/or COOH end gps. in (II). Pref. amt. of (III) corresponds to 0.3-1.1 (esp. 0.7-1.0) equiv. or to more than 1.1 equivs. NCO gps. capped as oligo-and/or poly-urethane) per free amino and/or COOH end gps. USE/ADVANTAGE - (I) are useful for producing fibres, films and moulded prods., and as hot melt adhesives (claimed). Provides a simple process for the rapid post-condensation of (II) by a defined coupling reaction in a stirred reactor or an extruder, to give prods. (I) with higher soln. viscosity and higher melt viscosity